UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,374	01/30/2002	Masami Adachi	111781	5855

25944 7590 02/13/2004

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER	
POE, MICHAEL I	
ART UNIT	**PAPER NUMBER**
1732	

DATE MAILED: 02/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

91

Office Action Summary	Application No.	Applicant(s)	
	10/058,374	ADACHI ET AL.	
	Examiner	Art Unit	
	Michael I Poe	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) *7-12* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *20020328*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

   I. Claims 1-6, drawn to a method for cutting/shaping a rubber strip into rubber band members, classified in class 264, subclass 163.

   II. Claims 7-12, drawn to an apparatus for cutting/shaping a rubber strip into rubber band members, classified in class 83, subclass 658.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions of Group I and Group II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the process as claimed can be practiced by hand wherein the rubber strip is placed onto the anvil by hand rather than by a conveying means as disclosed. Further, the process as claimed can be practiced by another and materially different apparatus such as an apparatus wherein the anvil is moved by means for moving the anvil toward the press cutter/shaper to thereby move the press cutter/shaper toward the anvil.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with applicant's attorney Joel Armstrong on January 30, 2004, a provisional election was made with traverse to prosecute the invention of Group I, claims 1-6. Affirmation of this election must be made by applicant in replying to this Office action. Claims 7-12 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of

inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Priority

6. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,293,795 (Osawa et al.) in view of U.S. Patent No. 4,878,521 (Fredrickson).

Claims 1-4

Osawa et al. teach a method for cutting and shaping belt-like members (rubber band members) into pieces used to produce tire cases (the rubber strip is a stretch of inner liner) including setting a raw material belt-like member 32 (a rubber strip) having its leading end cut and shaped into a predetermined configuration by a preceding operation on a conveyor belt 6 with the leading end being positioned under an upper die 29 having a die surface 31; conveying the raw material belt-like member 32 by a predetermined length by driving the conveyor belt 6; stopping the conveyor belt 6; descending the upper die 29 (a press cutter/shaper opposite the anvil, said press cutter/shaper comprising a pair of inclined shaping surfaces on front and rear sides and a cutting blade arranged between the front and rear shaping surfaces of the press cutter/shaper) onto the raw material belt-like member 32 so that it presses the raw material belt-like member 32 against a die surface 37 of a lower die 33 (an anvil having a flat shaping surface) jointly with the conveyor belt 6 (placing a rubber strip onto the anvil; moving the press

cutter/shaper toward the anvil); heating the die surfaces 31 and 37 (heating the press cutter/shaper to a predetermined temperature) such wherein the raw material belt-like member 32 is plasticized by the heat transmitted from the die surfaces 31 and 37 and is shaped similarly to the die surfaces 31 and cut by the pressure applied by the both dies 29 and 33 (cutting the rubber strip at a predetermined cut position in its longitudinal direction to form a rubber band member, with a trailing end of the rubber band member and a leading end of the remaining rubber strip being clamped between the front and rear shaping surfaces of the press cutter/shaper and the flat shaping surface of the anvil, respectively, and thereby deformed and shaped); descending a separating member 38 onto the cut raw material belt-like member to hold the cut raw material belt-like member 32 to the conveyor belt 6 while the upper die 29 is ascended; and ascending the separating member 38 and advancing the conveyor belt 6 by the predetermined length so that the process can be repeated (column 6, line 46 - column 7, line 35). As illustrated in Figure 5, Osawa et al. further teach that the upper die 29 has a pair of inclined shaping surfaces on front and rear sides wherein each shaping surface of the upper die 29 is inclined with a relatively small angle relative to the shaping surface of the lower die 33 so that the front and rear shaping surfaces of the upper die 29 intersect each other with a predetermined intersection angle and that the ends of the raw material belt-like member 32 at the cut after cutting have a cross-section with a thickness which decreases gradually toward the cut position to form inclined jointing surfaces. Note that the point of the upper die 29 would constitute a cutting blade in the process of Osawa et al.

Osawa et al. do not specifically teach that the lower die 33 has an anvil groove that extends in the width direction of the rubber strip; that the upper die 29 has a cutter blade protruding from the front and rear shaping surfaces toward an anvil groove in the lower die; that the cutting blade has a blade angle defined by front and rear surfaces of the cutting blade which is smaller than the intersection angle of the shaping surfaces of the upper die 29; that at least one or both of the front surface and rear surface of the cutting blade is pressed against corresponding edges of the anvil groove so as to cut the rubber strip at a predetermined cut position or at two predetermined cut positions, respectively; and that the anvil groove of the lower die 33 has a V-shaped cross section having a groove wall intersection angle between front and rear walls of the anvil groove which is approximately the same as the blade angle of the cutting blade

of the upper die 29. However, Fredrickson teaches a method for parting battery grid plates made of plastic material including feeding multi-unit battery plate grids 31 by supply conveyor 57 from a supply station 53 and through a parting device or means 61 to divide the multi-unit grids 31 into two individual or separate battery plate grids or pieces 21 wherein the parting device or means 61 includes an upper cutting roller disc 65 (a press cutter/shaper arranged opposite to the anvil, said press cutter/shaper comprising a pair of shaping surfaces on front and rear sides), fixedly carried on a rotatable upper transverse shaft 73, having two side faces 75 and 77 (said cutting blade having a blade angle defined by front and rear surfaces of the cutting blade, said blade angle being smaller than said intersection angle of the shaping surfaces of the press cutter/shaper) which form a cutting portion 79 having a knife or cutting edge 81 located in a cutting plane 83 positioned to cut the multi-unit grids 31 (a cutting blade arranged between the front and rear shaping surfaces of the press cutter/shaper and protruding therefrom toward the anvil groove) and a lower or anvil roller 63 (an anvil having a flat shaping surface) having a center portion having a groove 91 (with an anvil groove that extends in the width direction of a strip to be placed thereon), designed to at least partially receive the cutting portion 79 of the cutting disc 65, which is defined by a pair of side faces 93 and 95 which define a bottom 97 and an included angle which is less than the included angle of the cutting disc 65 (the anvil groove has a V-shaped cross-section, having a groove wall intersection angle between front and rear walls of the anvil groove, said groove wall intersection angle being approximately the same as said blade angle of the cutting blade) (column 4, lines 64-68; column 3, lines 24-65; Figures 2-4). As illustrated in Figure 3, Fredrickson further teaches that the two side faces 75 and 77 of the cutting portion 79 contact the upper ends of the groove 91 to cut the grids 31 at two predetermined cut positions. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made and one of ordinary skill would have been motivated to provide a V-shaped cutting blade between the inclined shaping surfaces of the upper die 29, a corresponding V-shaped groove on the lower die 33, and a discontinuous conveyor means in the process of Osawa et al. as taught by Fredrickson to prevent wandering of the cutting edge to thereby provide more accurate cutting (see specifically column 3, line 49 - column 4, line 15 of Fredrickson).

9. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,293,795 (Osawa et al.) in view of U.S. Patent No. 4,878,521 (Fredrickson) and U.S. Patent No. 4,779,658 (Kawabata et al.).

Claims 5 and 6

The discussion of Osawa et al. and Fredrickson as applied to claim 1 above.

Osawa et al. in view of Fredrickson do not specifically teach that the rubber strip has reinforcement cords embedded therein and that the rubber strip is a stretch of inner liner in which chafers with reinforcement cords embedded therein are applied to side edges of the inner liner. However, Kawabata et al. teach a pneumatic safety tire formed from an inner liner N having a protruding rubber member 80 which is supported by a rubber chafer 90 and by a fabric member 91 made of textile cord bonded to the inner liner N (the rubber strip has reinforcement cords embedded therein; the rubber strip is a stretch of inner liner in which chafers with reinforcement cords embedded therein are applied to the side edges of the inner liner) (column 4, lines 29-37). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made and one of ordinary skill would have been motivated to use the process of Osawa et al. in view of Fredrickson to make the inner liner / chafers assembly used for making a tire in the process of Kawabata et al. to provide quicker tire making by eliminating the step of bonding the chafers to the inner liner during the tire assembly process.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 1,975,219 (Alexander et al.), U.S. Patent No. 5,015,223 (Boeckmann), U.S. Patent No. 5,375,751 (Makinen), U.S. Patent No. 5,552,101 (Fujii et al.), U.S. Patent No. 5,613,414 (Murphy et al.), U.S. Patent No. 5,901,619 (Aihara), and German Patent Publication No. DE 3808005 A1 (Sato) have been cited of interest to show the state of the art at the time the invention was made.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael I Poe whose telephone number is (571) 272-1207. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Poe/mip

MICHAEL COLAIANNI
PRIMARY EXAMINER